WHAT IS CLAIMED IS

1. Spindle-shaped magnetic alloy particles containing Fe and Co as main components, having a cobalt content of 20 to 50 atm%, calculated as Co, based on whole Fe; an average major axis diameter (L) of 0.03 to 0.10 μm; a coercive force value of 159.2 to 238.7 kA/m (2,000 to 3,000 Oe); a crystallite size of 100 to 160 Å; and an activation volume ($V_{act}$) of 0.01 to 0.07E-4 $\mu m^3$.

2. Spindle-shaped magnetic alloy particles containing Fe and Co as main components according to claim 1, which have a cobalt content of 20 to 45 atm%, calculated as Co, based on whole Fe; an average major axis diameter (L) of 0.03 to 0.08 μm; a coercive force value of 159.2 to 238.7 kA/m (2,000 to 3,000 Oe); a crystallite size of 110 to 160 Å; and an activation volume ($V_{act}$) of 0.015 to 0.07E-4 $\mu m^3$.

3. Spindle-shaped magnetic alloy particles containing Fe and Co as main components according to claim 1, which further have an average minor axis diameter of 0.008 to 0.020 μm; and an aspect ratio (average major axis diameter/average minor axis diameter) of 3:1 to 8:1.

4. Spindle-shaped magnetic alloy particles containing Fe and Co as main components according to claim 1, which

further have a rotational hysteresis integral value (Rh) of not more than 1.0.

5. Spindle-shaped magnetic alloy particles containing Fe and Co as main components according to claim 1, which further have a saturation magnetization value of 100 to 150 $Am^2/kg$; and a rotational hysteresis integral value (Rh) of not more than 1.0.

6. Spindle-shaped magnetic alloy particles containing Fe and Co as main components according to claim 1, which further have a BET specific surface area value of 40 to 75 $m^2/g$; and a squareness ($\sigma r/\sigma s$) of 0.52 to 0.55.

7. A magnetic recording medium comprising a non-magnetic substrate, and a magnetic layer formed on the non-magnetic substrate, which comprises the spindle-shaped magnetic alloy particles containing Fe and Co as main components as defined in claim 1, and a binder resin.

8. A magnetic recording medium according to claim 7 which has a coercive force value Hc of 159.2 to 238.7 kA/m (2,000 to 3,000 Oe); a squareness (Br/Bm) of not less than 0.82; an orientation degree of not less than 2.0; an oxidation stability ($\Delta Bm$) of less than 8%; and a surface

roughness Ra of not more than 8 nm.

9. Spindle-shaped magnetic alloy particles containing Fe and Co as main components, having a cobalt content of 20 to 45 atm%, calculated as Co, based on whole Fe; an average major axis diameter (L) of 0.03 to 0.08 μm; an average minor axis diameter of 0.008 to 0.020 μm; an aspect ratio (average major axis diameter/average minor axis diameter) of 3:1 to 8:1; a coercive force value of 159.2 to 238.7 kA/m (2,000 to 3,000 Oe); a crystallite size of 110 to 160 Å; and an activation volume ($V_{act}$) of 0.01 to 0.07E-4 $\mu m^3$.

10. Spindle-shaped magnetic alloy particles containing Fe and Co as main components, having a cobalt content of 20 to 50 atm%, calculated as Co, based on whole Fe; an average major axis diameter (L) of 0.03 to 0.10 μm; an average minor axis diameter of 0.008 to 0.020 μm; an aspect ratio (average major axis diameter/average minor axis diameter) of 3:1 to 8:1; a coercive force value of 159.2 to 238.7 kA/m (2,000 to 3,000 Oe); a crystallite size of 100 to 160 Å; an activation volume ($V_{act}$) of 0.01 to 0.07E-4 $\mu m^3$; and a rotational hysteresis integral value (Rh) of not more than 1.0.

11. Spindle-shaped magnetic alloy particles containing Fe and Co as main components, having a cobalt content of 20

to 50 atm%, calculated as Co, based on whole Fe; an average major axis diameter (L) of 0.03 to 0.10 μm; an average minor axis diameter of 0.008 to 0.020 μm; an aspect ratio (average major axis diameter/average minor axis diameter) of 3:1 to 8:1; a coercive force value of 159.2 to 238.7 kA/m (2,000 to 3,000 Oe); a saturation magnetization value of 100 to 150 $Am^2/kg$; a crystallite size of 100 to 160 Å; an activation volume ($V_{act}$) of 0.01 to 0.07E-4 $\mu m^3$; and a rotational hysteresis integral value (Rh) of not more than 1.0.

12. A magnetic recording medium comprising a non-magnetic substrate, and a magnetic layer formed on the non-magnetic substrate which comprises the spindle-shaped magnetic alloy particles containing Fe and Co as main components as defined in claim 1, said magnetic recording medium having a coercive force Hc of 159.2 to 238.7 kA/m (2,000 to 3,000 Oe); a squareness (Br/Bm) of not less than 0.82; an orientation degree of not less than 2.0; an oxidation stability ΔBm of less than 8%; and a surface roughness Ra of not more than 8 nm.

13. A magnetic recording medium comprising a non-magnetic substrate, and a magnetic layer formed on the non-magnetic substrate which comprises a binder resin and spindle-shaped magnetic alloy particles containing Fe and Co

as main components as defined in claim 1 which have a cobalt content of 20 to 50 atm%, calculated as Co, based on whole Fe; an average major axis diameter (L) of 0.03 to 0.08 μm; an average minor axis diameter of 0.008 to 0.020 μm; an aspect ratio (average major axis diameter/average minor axis diameter) of 3:1 to 8:1; a coercive force value of 159.2 to 238.7 kA/m (2,000 to 3,000 Oe); a crystallite size of 110 to 160 Å; an activation volume ($V_{act}$) of 0.01 to 0.07E-4 $\mu m^3$, said magnetic recording medium having a coercive force Hc of 159.2 to 238.7 kA/m (2,000 to 3,000 Oe); a squareness (Br/Bm) of not less than 0.82; an orientation degree of not less than 2.0; an oxidation stability ΔBm of less than 8%; and a surface roughness Ra of not more than 8 nm.